The Scientific American Supplement. Index for Vol. 71.

JANUARY–JUNE, 1911.

The * Indicates that the Article is Illustrated with Engravings.

A

Accelerometer, for road measurement, etc. 67
Aeroplane altitudes, determining *356
Aeroplane, military scout *289
Aeroplane under carriages *324
Aeroplanes at Olympia, Dunn monoplane *314
Aero exhibition, at Olympia, 1911 ..... *241
Aerial ferry at Rouen 288
Aeroplane stabilizing system of Wright brothers *20
Aeroplane and airships in war..206
Aeroplane, wireless experiments.307
Aeroplanes and aerial engines, alloys for 338
Aging wood, new process 157
Agricultural problem, weeds and chemistry ..... I, *76; II, *93
Airship anchorages *384
Airship and aeroplane in war....206
Air-brake as related to locomotion—I, *212; II, *228; III, *244; IV, *261
Airships and wireless telegraphy.*247
Air propellar testing apparatus*388
Altitudes of aeroplanes determined *356
Alcohol, varieties of 43
Aluminium and Bradley patents. 90
Albinism and heredity 74
Alloys, aluminium copper 384
Alloys for permanent magnets...215
Alloys, magnetic *155
Alloys for aerial engines and aeroplanes 338
Alps could run the railways....302
Alterations of checks *372
Aluminium, corrosion 362
Amalgamatory gold ores, electrolytic system *339
Anchorages, airships *384
Animals, radium effect on higher.211
Animals living, light of *284
Antarctic expedition, German..*292
Animal diseases, eradication of..217
Animal husbandry 201
Antigua, Central American city of ruins *225
Ancestors, apotheosis and worship of *61
Apotheosis and worship of ancestors *61
Archeological research recent, Pompeii 163
Art and the engineer 119
Armament of battleships 67
Arc lamp for triphase circuits... 23
Argon process in the laboratory. 39
Armada, relics of Spanish *92
Astronomical laws, discovery of Kepler's *258
Asbestos industry, Canada 287
Astronomy of precision, aims of..222
Acre production overtaking population 217
Astronomy, new methods in...*156
Astronomical clock of Venice...*129
Atmosphere of cities 367
Atmosphere of the sun, entire disclosure of *310
Automobiles, alloy steels for....130
Automobile horn—the testophone.*21
Automatic stabilizing system, Wright brothers *20
Automobile show at Paris, by manufacturers *24
Automobiles, shop jobs on old..*184
Automobiles, Hellmann's suspension for *337
Automatically drawn curves...*368
Aviation, transceeanic 59
Aviation progress in 1910..... 6

B

Bacteria preparations for plague. 75
Battleships, armament of..... 67
Balloons, compass for..... 395
Balloons, Dessau gas for..... 115
Balloon signals..... 30
Balloon ascension, Blenaime's proposed 267
Balloons, preparation of gas..... 210
Bamboo, increasing use of..... 375
Barrage, a great German..... 272
Barogram, instructive *195
Basket willows, forcing method.*273
Beams, recent practice in rolled "H" *52
Bear, great Polar, capture of...*161
Bee as an engineer.....*331
Bees, money out of—I, *108; II, *124; III, *140
Beet sugar and light..... 128
Bell, Independence of Mexico.... 75
Bergen-Christiania railway.....*81
Bergen-Christiania railway, contrasted with American.....*215
Birds, how they work together. 7
Biophotogenesis, chemistry of....250
Biplane, Maurice Farman, Puy de Dome *300
Bituminous rock quarry. *296
Biplane first rising from the water *132
Blast furnace, wastes of..... 355
Blind, experiments with..... 349
Block signal, new Paris subway.135
Blowing tubs and gas engines..*321
Blue-printing by machinery....*153
Boring machine, portable electric.*207
Bridge, a reinforced concrete..*196
Breakwaters, coast of Jutland.*209
Bradley patents and aluminium.. 90
Brick, the Asiatic..... 238
Bricks, gravity service for handling *280
Brucker's transoceanic balloon course 59
Building materials and noise.....362
Buoy, life saving luminous.....*315
Bulldogs and pups, origin of.... 14
Butterfly farms in France..... 43
Bubonic plague and rats..... 75

C

Camphor industry, Japanese and Formosa 251
Car, lighting electric..... 82
Cars, steel, for passenger trains.*377
Carbon electrodes, the manufacture 2
Carbureter, variable—speed....*126
Carbureters and vaporizers.....*364
Canal between Paris and Rouen.*75
Cellulose, chemistry of..... 146
Cement-protected iron 384
Cement sidewalk paving.....*180
Carnegie foundation, fifth report.134
Cast and forged steel, electric works 135
Cathode rays in telephotography.162
Carriage robe, catskin.....183
Ceilings, solid between iron girders *279
Cement, new compound Glyptolith 117
Cement, white 94
Checks, alterations of.....*372
Chemical industry problems.....132
Chemistry of cellulose..... 146
Chemical knowledge, limits of.... 7
Chemistry, new elements..... 18
Chemical misnomers 38
Chemistry of inks in writing..*302
Chinese subterranean watercourse *164
Chemistry, lecture before Kaiser Wilhelm Society..... 350
Chemistry, lost arts of..... 366
Chemical means for destroying weeds .....I, *76; II, *93
Cheese as an article of diet.....203
Cities, atmospheres 367
Climate effect on forests..... 94
Clocks, escapement for pendulum.338
Clock, astronomical, Venice....*129
Clamp for washing negatives...*123
Coal cutting machinery and mine railways *113
Coal—dust experiments, Pittsburg 217
Coal dust, Bruceton experimental mine *248
Cocoanut palm, products and uses *302
Cold Storage 398
Compass for balloons..... 395
Concrete reinforced with wood..287
Concrete reinforced building, demolishing *345
Concrete and hydrogen sulphide,110
Concrete, mixing German tests.. 91
Concrete reinforced county bridge *196
Concrete mining pier, Spanish..*145
Congress of refrigerative industries .....I, *102; II, *114
Concrete, forms for.....*29
Concrete mixing on the farm....*12
Congress of refrigerative industires .....I, *102; II, *114
Copper effected by silver, bismuth, etc. 3
Copper production and reserves..343
Copying process for print and manuscript 344
Cotton in Egypt, cultivation.....309
Corrosion of iron..... 69
Crystals, formation, growth and habit 226
Crystals, magnetic properties of..*37
Crane collection N. Y. Zoo Park.193
Crank turning device.....*207
Curtiss's experiments in rising from the water.....*132
Curved photographic plates....*197
Curves, automatically drawn...*368

D

Daily Telegraph paper-making machine *1
Dam, sliding gate..... 157
Darwin, Charles, justification—I, 266; II, 274; III, 296
Dates, previous, fixing day of week 371
Day of week of previous dates, fixing the 371
Dead, what men do with the....174
Delos excavations 279
Demolishing reinforced concrete building *345
Deserts, rocky, features of..... 171
Design, fitness in machine..... 149
Davenport, Thomas, electrical engineer 154
Dessau gas for balloons..... 115
Diesel marine engines—I, *316; II, *332; III, *348
Dirigible "NI" rigid, of English navy *344
Diseases, animal, eradication of.217
Dreadnoughts: American and Argentine 78
Dredging industry, gold 135
Drink, Lacto, a scientific summer.320
Drifting of the Sim's family.... 74
Dynamics of flying machine....*286
Dynamometer, 1,000 brake H.P. water *178

E

Eagle hunting in China.....*265
Earth, exploring interior.....*220
Earth, heat from..... 393
Echoes, celebrated 30
Efficiency, securing in railroad work 235
Electric steel furnace.....*353
Electric currents and under-"Electric Eye" Prof. Rosing's...*384
ground pipes *294
Electric switch, ingenious mechanism *234
Electric locomotive, high power.*105
Electric subway in Paris.....*65
Electric locomotives, Lotschberg R. R. *60
Electric ship propulsion.....*340
Electric traction by storage batteries *28
Electrochemistry, electric furnaces .....I, 50; II, 70
Electricity from falling water drops 211
Electricity in metallurgy of iron.*204
Electrolytic system, amalgamating gold ores *339
Electrodes, manufacture of carbon 2
Electric car lighting..... 82
Electric furnaces, reliability.....118
Electroplating, some unsolved problems 319
Electric lighting in China..... 27
Electric furnace, ionisation.....354
Electrical machinery and Paris flood 215
Electrometallurgy, electrochemistry .....I, 50; II, 70
Elephant hunting, Central Africa.167
Electrochemistry, industrial processes .....I, 50; II, 70
Electrochemistry, electric ores and gas discharges .....I, 50; II, 70
Elephant domestication in Africa 396
Embryology experimental, Roux and his work.....*252
Engineers and journalists.....278
Engineer and art.....119
Engineering and science, presidential address 58
Engine, steam threshing oldest in service *387
Engines, Diesel marine—I, *316, II, *332; III, *348
Engines, steam, safety stops for.*172
Engineering, illuminating, value to manufactures 151
Environment and heredity.....122
Ether, what is the..... 10
Equalizers, magnalium *336
Equation, quadratic *359
Escapement for pendulum clocks.338
Evolution of stellar systems, new theories 202
Evolution governs invention....322
Excavations, Abasside Palace....171
Excavations at Susa.....*369
Explosives, precautions in use of..159
Exploring in Sinai Peninsula....*33
Experimental science teaching...*36
Exploring earth's interior.....*220
Explosion motor, Renaults valveless *223
Existence, problems of..... 13
Explorations in Chaldea.....272
Exposition, hygiene at Dresden.*385
Excavations at Knossos.....19
Exercise and its demand on the heart 51
Explosion, propagation of sound. 51
Exporters, how they should pack.*360
Eugenics and genetics.....271

F

Fabrics, waterproofing 294
Farman's biplane, Puy de Dome flight *300
Farm, mixing concrete on.....*12
Farmers, work among southern..197
Farmer, no complaint against...205
Ferrosilicon's resistive property.299
Ferry, aerial at Rouen.....288
Ferry's total reflectometer *352
Financial asset, research as a...346
Fishes, do they hear?..... 11
Fire and burglar-proof safes... I, 295; II, 308
Fire alarm and police call, German *148
Fire extinguishing service, deluge sets *97
Flying machine, dynamics of..*286
Flying machine improvement, sustaining area, etc. *100
Forage crops 205
Fog scales 59
Forests and climate..... 94
Forest railway, American.....*50
Four-carbon arc lamp..... 23
Fractional precipitations, radium salts *259
Freezing sea water.....112
Fruit disease investigations.....195
Fuel, crude oil in French navy.391
Furnace for high temperature..*207
Furnaces, reliability of electric furnaces 118
Fur, artificial 320
Furnace, wastes of a blast.....355
Furnace, ionization in electric..354
Furnace, electric steel *353

G

Garbage, disposition in European cities 22
Gas and oil in Tennessee.....112
Gas, Dessau, for balloons.....115
Gas poison from heaters.....299
Gas power development: Review 98
Gas engine governing mechanisms *4
Gas possibilities, ozone.....*84
Gas, preparation for balloons....210
Gas engine exhaust..... 2
Gas turbine, proposed types....*101
Gasoline fractor, 100 H.P. capacity *168
Gas engines and blowing tubs..*321
Gas machine, new.....*327
Garages, universal tool for.....*320
Genetics and eugenics.....271
Geodesic work, Invar wires for..158
Geological Society of America.. 45
Geology and our national resources 275
Girders, iron, solid ceilings between *279
Glacier barriers, mastering the Alaskan *305
Governing mechanisms, American and European *4
Generation of Power 87
Gas engine design and scientific error 91
Gold dredging industry.....135
Gold ores, electrolytic system of amalgamating *339
Gould $15,000 flying machine prize, 151, 246, 315
Gould competiton, flying machine rules 66
Government publication, bulletins, documents, etc..... 60
Grain standardization and wheat.214
Gravity service for handling bricks *280
Grapevine diseases 307
Guns in mine-laying vessels....109
Gutta-percha Tree, to save.....387
Gyroscopes for stabilizing aeroplanes 362
Gyroscope used with moving picture camera 143

H

Hauriot's French flying-machine.*236
Heat from the earth.....393
Heaters, poisoning gas.....299
Heating and ventilating the Yarrow Home 330
Heredity and Albinism..... 74
Heredity and environment.....122
Health, public's bureau of.....188
Hertz effect of ultra-violet rays.*291
"H" beams, manufacture of rolled*52
"Holy Mountain," Sinai exploration *33
Horses, real wild..... 18
Horse, the hoof of.....295
Houses, moving in Germany...*328
Honeycomb, structure of a piece.*331
Hydrocarbon engine, Knight's...*44
Hydroplane floats, Curtiss experiments *132
Hydrography discussed geographically 3
Hydrogen, manufacture of..... 21
Hygiene exposition, Dresden....*385

I

Ignition system, two-point.....318
Illuminating engineering, value to manufacturer 150
Illuminating engineering, value to commercial man.....190
Impact testing machine.....235
India rubber plants, business aspects 174
Insecticides, French studies of..270
Inks, something about writing..320
Inks, chemistry of, in handwriting *302
International standard time....*260
Iron, metallurgy of and electricity *204
Iron industry U. S. 294
Iron ore grades and ore reserves.314
Iron ore reserves, our.....325
Iron corrosion 69
Inheritance of acquired characters 36
Initiator, the mathematical.....*13
Insecticides and soap.....104
Institute, Paris oceanographic.*376
Invention, nature of.....322

J

Jarman's system of electric traction *28
Jutland west coast breakwaters.*209
Jupiter, great red spot of.....336

K

Kepler's laws, discovery of....*258
Kinetic theory, radioactivity, and fourth state of matter.....334
Knossos: Discoveries at..... 19

L

Laboratory, physical apparatus for *189
Laboratory, modern X-ray.....*293
Lacto, scientific summer drink..320
Lakes, disappearance of.....393
Lamps, incandescent, frosting, etching, etc. 255
Lamps, new researches on quarts *288
Lamps, metallic filament shock resistance *138
Lead poisoning and surface tension 336
Lead, the world's supply.....354
Legal operations, Department of Agriculture 221
Life saving luminous buoy.....*315
Light, production of by living organisms 250
Lighting, electric car..... 82
Light and sugar in beets.....128
Light, its relation to growth of plants 163
Light of the sky..... 46
Light of living animals.....*284
Limitation of mineral resources.375
Literature and science, Lord Morley on 227
Lizard experiments, Dr. Kammerer's 36
Locomotive, electric, Lotschberg, B. R. 60
Locomotive power, for fast trains 3
Locomotive operation, economics of 303
Locomotion, air-brake related to, I, *212; II, *228; III, *244; IV, *261
Locomotive, electric, high power.*105
Louisiana wet prairie lands drainage .....I, *268; II, *276

M

Machine, paper-making *1
Machinery for blue-printing....*153
Machine design, fitness.....149
Machine, new gas.....*327
Machine, portable electric boring *207
Magnetic crystals *37
Magnetic alloys *155
Magnalium equalizers *336
Magnetic adhesion and boring machine *207
Magnets, alloys for permanent..215
Maps, world's daily weather...*188
Mariotte's bottle in experimental science *36
Marble, Greek.....338
Marconi's wireless in a London court 14
Marksmanship, mechanical aids to study *196
Mastication, art neglected.....117
Mathematics and weighing the earth 62
Mathematical initiator *13
Meat, economy in production.... 87
Mechanical handling of materials, recent progress 326
Mechanical flight, dangers of..*286
Mental illusions of vision.....*143
Mesothorium and radiothorium...323
Medals and flags deposited by Peary 59
Metal toncan 165
Metallurgy of iron, and electricity *204
Metal, new system of perforating *395
Metals, structure of.....*72
Metropolitan museum's Egyptian expedition *8
Milk sterilization 5
Mine-laying vessels, guns in....100
Mine railways and coal cutting machinery *113
Migrating stars, drip theories..*139
Mines exploded by sound waves..300
Mine, Bruceton experimental...*248
Mineral resources, limitation of.375
Mines, saving human lives in..*257
Micrometer, sensitive indicating.*151
Mica production in India.....115
Microphotographic pictures of metals *72
Mirage in London.....104
Moths, gipsy and brown-tail.....195
Money value of pure science....346
Motor car, modern, progress....298
Motor, Knight's valveless.....*44
Motor, Renault's valveless explosion *223
Monoplane, the Hanriot.....*236
Monoplane, the Morane.....*397
Mountain winds and their names 80
Mountains, making of.....307
Moving picture camera, and gyroscope 143
Moving houses in Germany.....*328
Motor truck for hauling building, stones *116
Money making out of bees—I, *108; II, *124; III, *140
Multi-cipher device *368
Multiplication, short cuts.....352
Multiplication table apparatus..*13
Mercadier system of multiplex telegraphy 270

N

Navy, American, material and personnel 106
Negatives, camp for washing...*133
"N I" rigid dirigible, English Navy *344
Noble prize winner, Van der Waals 138
Noise and building materials...362
Nursery stock inspection.....123

O

Oceanographic institue, Prince of Monaco's *376
Odd things, a few.....343
Oil and gas in Tennessee.....112
Oil fuel, crude, in French navy.391
Olympia, aero exhibition, 1911..*241
"Olympic," 60,000-ton vessel....*72
Olympic and Titanic, giant steamships *380
Ozone, manufacture and application *84

P

Packing by exporters, how to be done *360
Palm, cocoanut, products, uses.*392
Paper-making machine *1
Parasites and rainfall.....391
Paris oceanograph museum....*376
Paris subway, additional points about 147
Paris flood, effect on electrical machinery 215
Paris as a seaport.....*75
Paving, cement sidewalk.....*180
Peary medals and flags..... 59
Pearl diving, up-to-date.....265
Peeler, potato 197
Perforating metal, new system..*395
Phosphorescence, invisible 151
Photographic plate 220
Physics of the Polar Seas.....170
Physical apparatus for laboratory, *189
Photogenic organs, structure...*284
Pier, Spanish mining concrete..*145
Pipe-bending device *352
Pipes underground and electric currents *294
Plant discoveries, S. W. Asia...234
Plague and rats..... 96
Plants, relation of light to their growth 163
Plate potentials of storage battery 279
Plate, photographic 220
Plates, curved photographic....*197
Polonium 71
Police call and fire alarm systems *148
Polar bear, capture of.....*161
Polar seas, physics of.....170
Population increase and acre production 217
Power station, economic limitations 166
Power systems, aggregation of..166
Power plant of Lesquinn.....155
Power production from solar radiation 39-78
Power, generation of..... 87
Problems of existence..... 13
Prime mover possibilities: Review 98
Propeller, air, testing apparatus.*388
Propeller, screw, design..... 94
Psychanalysis, facts of mental life 256
Potash salts, light on controversy .....I, 198; II, 218
Potato peeler, concrete.....197
Prairie, wet lands, reclamation, I, *268; II, *276
Problems and advances in chemistry 350
Pygmy people of Africa.....*137

Q

Quadratic equation, solution....*359
Quarry, bituminous rock *296

R

Radium, effect on higher animals.211
Radiation, instrument for measuring nocturnal 230
Radient energy and matter....I, *363; II, 370; III, *394
Radium salts, preparation of pure *259
Radiothorium and mesothorium.323
Radioactivity, kinetic theory of fourth state of matter.....334
Railway signals, training men for. 39
Railway, forest in Michoacan, Mexico *50
Railroad, rapid transit, handling passengers .....I, 178; II, 194
Railways could be run by the Alps 362
Railroad work, securing efficiency in 235
Rainfall and parasites.....391
Rapid transit, handling railroad passengers .....I, 178; II, 194
Rats and plague..... 96
Ravine formation, rocky deserts.171
Reforestation of our treeless areas 104
Refrigerating process, Repin's...283
Research, as a financial asset....346
Research as a financial asset....346
Railway, Bergen—Christianis ..*81
Railway, Bergen — Christiania compared with American.....*215
Refining sugar processes.....358
Reclamation of wet prairie lands I, *268; II, *276
Reflectometer, the Ferry total..*352
Refrigeration and low temperature .....I, *102; II, *114
Riddles of science: Chemical theories 18
Road making in U. S., bituminous treatment 254
Robe, carriage, catskin.....183
Romanized Typewriter type....*396
Rubber plants, India, culture and exploitation 174

S

Safety stops for steam engines..*172
Safes, fire and burglar-proof..I, 295; II, 308
Salts, potash, light on controversy .....I, 198; II, 218
Science and engineering, presidential address 58
Science and literature, Lord Morley on 227
Screw, to remove a wood..... 78
Screw propeller design..... 94
Scout, aeroplane military.....*289
Sea water freezing.....112
Seaport, enlarging a Baltic.....256
Sea water transformed into fresh 11
Seaport, Paris as a.....*75
Seeds growing in potash solution.275
Sets for fire extinguishing service.*97
Selenium, new variety.....331
Sheep shearing by machinery...*175
Shop jobs on old auto-cars....*184
Ship propulsion, electric.....*340
Sights and sight holes, marksmanship aids *196
Signatures, and how to write them 374
Sky, light of.....46
Sliding gate dam.....157
Snow blindness 95
Snow-plow on Scandinavian railway *81
Soap and insecticides.....104
Soap-nut tree, products.....107
Soda lakes 238
Soil surveys 196
Solar radiation: Power production from 39-78
Solid: Possibility of its superheating 30
South Sea swells.....345
Sound in explosion..... 51
Space and time, are they infinite?.105
Stalacitites, on laboratory and nature *379
Spanish Armada, relics.....*92
Star, measuring brightness of...162
Stars in the universe, how counted 19
Stars, migrating, star drift theories *139
Standard time, determination....158
Steamships, Olympic and Titanic *380
Steel, electric works for cast and forged 135
Steels, alloy, for automobiles....130
Star clusters 191
Steel cars for passenger trains.*377
Steel works, new, in South Wales 99
Stellar magnitudes 162
Stellar systems, evolution of....202
Storage battery plate potentials.279
Street-car wheels 283
Streams polution and typhoid.*239
Stones, motor truck for hauling building *116
Sterilizing process for water at Marseilles *73
Structure of metals.....*72
Style in original scientific articles.288
Submarine boat, "V 3".....*282
Submarine boats, development of I, 26; II, 34
Subway, points about new Paris.147
Subway, electric in Paris.....*65
Subway, new Paris block signal..135
Sugar refining processes.....358
Sulphide hydrogen and concrete.110
Sulphur in New Zealand Island.362
Surveys, soil 196
Susa, excavations at.....*369
Suspension for automobiles, Heilmann *337
Sun's family drifting..... 74
Sun, luminosity of.....255
Sun, entire atmosphere disclosed.*310
Swells, South Sea.....345
Switch, ingenious, electric mechanism *234

T

Tea diseases 14
Teleophotography, Cathode rays in 163
Telegraphy, Mercadier's multiplex system 270
Television, Rosing's "Electric Eye" *384
Temperature and humidity of workrooms 383
Tension surface, and lead poisoning 336
Testing apparatus, air propeller.*388
Testing, new impact machine.....235
Testophone: Automobile horn....*21
Textile manufacturing 285
Theory of the ether..... 10
Thousand-horse-power plant on wheels *105
Threshing, steam engine, oldest in service *387
Toncan metal 165
Tough-pitch, copper and arsenic. 3
Transportation, mechanical handling of materials.....326
Tramcar, a pioneer electric.....*28
Towers, European transformer..*60
Toys, new interesting French inventions 221
Tool, universal for garages.....*320
Transmitter, wireless, Lorens...*165
Tractor, gasoline, 100 H.-P. capacity *168
Tree, Gutta-percha 387
Trees felled by wire device..... 14
Time and space, are they infinite?.105
Tree, products of soap-nut.....107
Time, determination of standard.158
Truck, motor for hauling building stones *116
Tunnels, natural at Laos.....*164
Typhoid streams *239
Tubs, blowing, and gas engines.*321
Telephony, facts and principles.*68
Temple of Hibis..... *8
Temperatures, furnace for high.*207
Temperature and refrigeration—I, *102; II, *114
Time, international, standard...*260
Tungsten lamp, a 60-Watt.....291
Two-point ignition system.....318
Turbine, gas, proposed types....*101
Typewriter type, romanized....*396

U

Ultra-violet rays for sterilizing water *73
"U 3," salving German submarine, *282
Ultra-violet rays, Hertz effect...*291
Under-carriages of aeroplanes..*324

V

Vaccination, primitive 46
Valveless motor, Knight's.....*44
Vaporizers and carbureters.....*364
Van der Waals, Prof., of Leyden.138
Vanadium—Its discovery and history 35
Vehicle engineering, modern motor car 298
Venice, astronomical clock.....*129
Vessels built in Dutch yards..... 71
Vessels, guns in mine-laying.....100
Vision, mental illusions of.....*143

W

Wastes of a blast furnace.....355
Water, electricity from falling drops 211
Water, physical anomalies.....110
Water, depth and speed.....278
Water sterilized by ultra-violet rays *73
Water dynamometer absorbing 1,000 brake H.-P. *178
Waterproofing fabrics 294
Waterproof wall paintings..... 19
Weather maps, world's daily...*188
Weighing earth, sun, and planets.*62
Weeds, destroyed chemically...I, *76; II, *93
Wheat and grain standardisation.214
Wheels, street car.....283
White cement 94
Wing nuts, wrench for.....*336
Winds, mountain and their names 80
Wireless receiver trouble.....*299
Willows, method of forcing basket *273
Wireless telegraph and airships..*247
Wireless stations, working distances of *237
Wireless transmitter *165
Wireless telegraphy, diverted....175
Wires, invar, for geodesic work.138
Wireless telegraphy, early project.117
Wireless marvels explained in a London court 14
Wireless railroad signals.....365
Wireless telegraphy and electric lamps 338
Wireless on aeroplane.....307
Wood, new process for aging....157
Wood pulp 247
Wonderful city of the past, Antigua *225
Workrooms, temperature and humidity 383
Wrench for wing nuts.....*336
Wright's control system for aeroplanes *20

X

X-ray laboratory, The "Break"..*293

Y

Yarrow home, heating and ventilating 330
Yeast fermentation and electrical effects 347

Z

Zinc, various finishes..... 55
Zinc production, future.....185